

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A method of stimulating phosphate absorption by a cell, comprising contacting the cell with a stanniocalcin polypeptide selected from the group consisting of:
 - (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
 - (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
 - (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
 - (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
 - (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
 - (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
 - (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity.

2-15. (Cancelled)

16. (Original) A method of increasing resistance of a cell to hypoxic stress, comprising contacting the cell with a stanniocalcin polypeptide selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity.

17. (Original) The method of claim 16, wherein the polypeptide is (a).

18. (Original) The method of claim 16, wherein the polypeptide is (b).

19. (Original) The method of claim 16, wherein the polypeptide is (c).

20. (Original) The method of claim 16, wherein the polypeptide is (d).

21. (Original) The method of claim 16, wherein the polypeptide is (e).

22. (Original) The method of claim 16, wherein the polypeptide is (f).

23. (Original) The method of claim 16, wherein the polypeptide is (g).

24. (Original) The method of claim 16, wherein the polypeptide has an amino acid sequence that is at least 95% identical to (a) and has stanniocalcin biological activity.

25. (Currently Amended) The method of claim 16, wherein the polypeptide is fused to a ~~heterologous~~ heterologous polypeptide.

26. (Currently Amended) The method of claim 25, wherein the ~~heterologous~~ heterologous polypeptide comprises a constant domain (Fc) of immunoglobulin or a portion thereof.

27. (Original) The method of claim 25, wherein the heterologous polypeptide comprises albumin.

28. (Original) The method of claim 27, wherein albumin comprises human serum albumin.

29. (Original) The method of claim 16, wherein the cell is a neural cell.

30. (Original) The method of claim 16, wherein the cell is a cardiac cell.

31. (Original) The method of claim 16, wherein hypoxic stress comprises ischemia.

32. (Currently Amended) A method of protecting a cell challenged by hypoxic stress, comprising contacting the cell with a stanniocalcin polypeptide selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity. ~~The method of claim 64, wherein the polypeptide is (a).~~

33-47. (Cancelled)

48. (Currently Amended) A method of protecting a cell against harmful calcium levels, comprising administering to the cell a stanniocalcin polypeptide selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity. ~~The method of claim 64, wherein the polypeptide is (a).~~

49-62. (Cancelled)

63. (Currently Amended) A method of protecting a cell against calcium-mediated cell death, comprising contacting the cell with a stanniocalcin polypeptide selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity. ~~The method of claim 64, wherein the polypeptide is (a).~~

64-77. (Cancelled)

78. (Currently Amended) A method of diagnosing neural injury, comprising the steps of:

(I) assaying expression levels of a stanniocalcin polypeptide in cells or body fluid of an individual, wherein the polypeptide is selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity. ~~The method of claim 64, wherein the polypeptide is (a); and~~

(II) comparing the polypeptide expression level with a standard expression level, whereby an increase or decrease in the assayed expression level compared to the standard expression level is indicative of a injury.

79-102. (Cancelled)

103. (Currently Amended) A method of protecting a patient against neural injury comprising administering to the patient a therapeutically effective amount of a stanniocalcin polypeptide selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity. ~~The method of claim 64, wherein the polypeptide is (a).~~

104-120. (Cancelled)

121. (Currently Amended) A method of treating a patient having neural injury comprising administering to the patient a therapeutically effective amount of a stanniocalcin polypeptide selected from the group consisting of:

- (a) a polypeptide comprising V-34 to A-247 of SEQ ID NO:2;
- (b) a polypeptide having an amino acid sequence that is at least 90% identical to (a), wherein the polypeptide has stanniocalcin biological activity;
- (c) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment has stanniocalcin biological activity;
- (d) a polypeptide comprising a fragment of the polypeptide encoded by the human cDNA of ATCC Deposit No. 75652, wherein the fragment has stanniocalcin biological activity;
- (e) a polypeptide comprising an N-terminal deletion fragment described by the general formula m-247 of SEQ ID NO:2, wherein m is an integer from 2 to 242 and the deletion fragment has stanniocalcin biological activity;
- (f) a polypeptide comprising a C-terminal deletion fragment described by the general formula 1-n of SEQ ID NO:2, wherein n is an integer between 7 to 246 and the deletion fragment has stanniocalcin biological activity; and
- (g) a polypeptide comprising an N-terminal and C-terminal deletion fragment described by the general formula m-n of SEQ ID NO:2, wherein m is an integer from 2 to 242, n is an integer from 7 to 246, and the deletion fragment has stanniocalcin biological activity. ~~The method of claim 64, wherein the polypeptide is (a).~~

122-138. (Cancelled)

139. (New) The method of claim 16 wherein said method is performed in vitro.